IN THE CLAIMS:

Please delete the previous version of claim 1 and insert the following new claim 1 therefor. (A marked-up version showing the changes made is attached hereto.)

1. (Twice Amended) A process for producing a polymeric actuator comprising an ion-exchange resin product and metal electrodes which are formed on the surface of the ion-exchange resin product and are insulated from each other, said actuator operating as an actuator by applying a potential difference between the metal electrodes when the ion-exchange resin product is in the water-containing state to allow the ion-exchange resin product to undergo bending or deformation,

wherein the following steps (i) to (iii) are repeatedly conducted to form the metal electrodes ranging from the surface of the ion-exchange resin product to the inside thereof;

(i) a step of allowing the ion-exchange resin product to adsorb a metal complex in an aqueous solution (adsorption step),

(ii) a step of reducing the metal complex adsorbed on the ion-exchange resin product by a reducing agent to deposit a metal on the surface of the ion-exchange resin product (deposition step), and

(iii) a step of washing the ion-exchange resin product having the deposited metal (washing step),

the number of cycles of the above steps is in the range of 4 to 9 ; wherein

in the case of an ion-exchange resin product being a plate or a film, the ratio of the thickness (a1) of the metal electrode formed on the ion-exchange resin product to the thickness (b1) of the ion-exchange resin product including the metal electrode (a1/b1) is in the range of 0.03 to 0.40,